

## **REMARKS**

Reconsideration of this application as amended is respectfully requested. Claims 3, 4, 6, 18, 19, 44 and 49 have been amended. The claim amendments are fully supported by the specification or drawing. No new matter has been added.

### ***Amendments to the Specification***

Applicant has amended the specification to correct minor errors. No new matter has been added.

### ***Elections/Restrictions***

The claims have been restricted to three groups as follows:

- I. Claims 1-22 and 39-49
- II. Claims 23-38
- III. Claims 50-61

Applicant hereby affirms the provisional election, made without traverse during a telephone conversation with the Examiner on March 17, 2004, to prosecute the claims of group I. Applicant acknowledges that the claims of groups II and III have been withdrawn from consideration by the Examiner.

### ***Claim Objections***

Claims 3 and 18 have been objected to due to lack of antecedent basis for the expression, "the second counter," and claim 4 has been objected to due to lack of antecedent basis for the expression "the first counter." Applicant has amended claims 3, 4 and 18, and additionally claims 6, 19 and 44, to clarify antecedent bases therein and submits that the objections are overcome. Applicant has also amended claim 49 to depend from claim 46 instead of claim 1.

### ***Drawings***

The drawings have been objected to as being informal. Formal drawings are enclosed herewith.

### ***Claim Rejections -- 35 U.S.C. § 103***

Claims 1-21, 39-44 and 46-49 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,625,766 to Oh et al. ("Oh"). Applicant

respectfully submits that claims 1-29, 39-44 and 46-49 are not obvious in view of Oh.

Claim 1 recites in part:

- a first counter circuit coupled to the CAM array, the first counter circuit being adapted to store an address value and to incrementally adjust the address value in response to a first control signal and to reset the address value to a start address in response to a second control signal;
- a second counter circuit to store a limit value and to incrementally adjust the limit value in response to the second control signal; and
- a compare circuit coupled to receive the address value from the first counter circuit and the limit value from the second counter circuit, the compare circuit being adapted to assert the second control signal if the address value and the limit value have a predetermined relationship.

The Office Action acknowledges that Oh does not disclose the above-recited second counter, but provides the following:

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to add the identical address counter 44 between the register (42) and the comparison circuit 60, in the second counter circuit of Oh, as to incrementally adjust the limit value by increasing or decreasing the counter accordingly, in response to the second control signal (CLEAR), since the counter in the second counter circuit functions identically with the counter in the first counter circuit.

(Office Action, page 6, paragraph 4, referring to Fig. 6 of Oh)

Applicant respectfully disagrees. According to Oh, prior-art testers of memory devices assume that the minimum and maximum addresses within a semiconductor memory device are power-of-two values, and therefore generate sequences of addresses that extend beyond the capacity of a memory device having a non-power-of-two storage capacity (Oh, col. 1 lines 36-43; col. 4, lines 11-25; and col. 5 lines 39-45). To overcome

this problem, Oh proposes setting up preset minimum and maximum values that correspond to the capacity of a memory device to be tested, counting up from the preset minimum value, comparing the count value with the preset maximum value and, if the count value has reached the preset maximum value, generating a carry signal to reset the count value (Oh, col. 1, lines 54-64; col. 6, lines 35-55; and col. 7, lines 32-64). As Oh is directed to precisely generating a desired magnitude of addresses that corresponds to the capacity of the memory device to be tested (Oh, col. 1, lines 36-43 and col. 2, lines 6-9), applicant submits that to modify Oh to include an additional counter for adjusting the preset maximum value in response to the carry signal would thwart the explicitly stated object of Oh by increasing or decreasing the magnitude of generated addresses above or below the capacity of the memory device to be tested. Applicant respectfully submits that it would not have been obvious to modify Oh in a manner that would undermine Oh's clearly stated object and, therefore, that it would not have been obvious to modify Oh to achieve the above-recited combination.

Because claims 2-21 depend from and further limit claim 1, applicant submits that, for at least the foregoing reasons, claims 2-21 also would not have been obvious in view of Oh.

Claim 39 recites a content addressable memory device comprising:

- means for accessing data stored at a first address value in a CAM array;
- means for comparing the first address value with a second address value to determine if the first address value and the second address value have a predetermined relationship; and
- means for incrementally adjusting the second address value if the first address value and the second address value have the predetermined relationship.

Applicant submits that Oh does not disclose or suggest the above-recited combination and that, for at least the reasons given with respect to claim 1, it would not have been obvious to modify Oh to achieve the above-recited combination. Because claims 40-43 depend from and further limit claim 39, applicant submits that claims 40-43

also would not have been obvious in view of Oh.

Amended claim 44 recites a content addressable memory device comprising:

- a CAM array having a plurality of rows of CAM cells;
- a first counter to store an address for one of the rows of CAM cells;
- a second counter to store a limit value;
- a compare circuit coupled to the first and second counters to compare the address with the limit value; and
- an address decoder coupled to the first counter and the CAM array to select one of the rows of CAM cells corresponding to the address.

Applicant submits that Oh does not disclose or suggest the above-recited combination and that, at least for the reasons given with respect to claim 1, it would not have been obvious to modify Oh to achieve the above-recited combination. Because claims 46-49 depend from and further limit claim 44, applicant submits that claims 46-49 also would not have been obvious in view of Oh.

Claims 22 and 45 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Oh in view of U.S. Patent No. 6,085,334 to Giles et al. ("Giles"). Applicant respectfully disagrees with this reason for rejection. As discussed above, Oh does not disclose the second counter as recited in claim 1 and it would not have been obvious to modify Oh to include the second counter. Giles also does not disclose or suggest the second counter as recited in claim 1 so that, even if Giles and Oh could be combined in the manner suggested in the Office Action, the resulting combination would not meet all the limitations of claim 1. Accordingly, because claim 22 includes all the limitations of claim 1 as well as additional limitations, applicant submits that claim 22 is not obvious in view of the proposed combination of Giles and Oh.

As discussed above, Oh does not disclose or suggest the combination recited in claim 44 and, at least for the reasons given with respect to claim 1, it would not have been obvious to modify Oh to include the combination recited in claim 44. Applicant submits Giles also does not disclose the combination recited in claim 44 and further that, even if Giles and Oh could be combined in the manner suggested in the Office action, the

resulting combination still would not meet all the limitations of claim 44. Accordingly, because claim 45 includes all the limitations of claim 44 as well as additional limitations, applicant submits that claim 45 is not obvious in view of the proposed combination of Giles and Oh.

***Conclusion***

Applicant respectfully submits that claims 1-22 and 39-49 are in condition for allowance. If a telephone interview would be helpful in any way, the examiner is invited to call the undersigned attorney.


A Petition for Extension of Time is enclosed herewith.

Authorization is hereby given to charge deposit account 501914 for any fee deficiency associated with this Amendment.

Respectfully submitted,

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